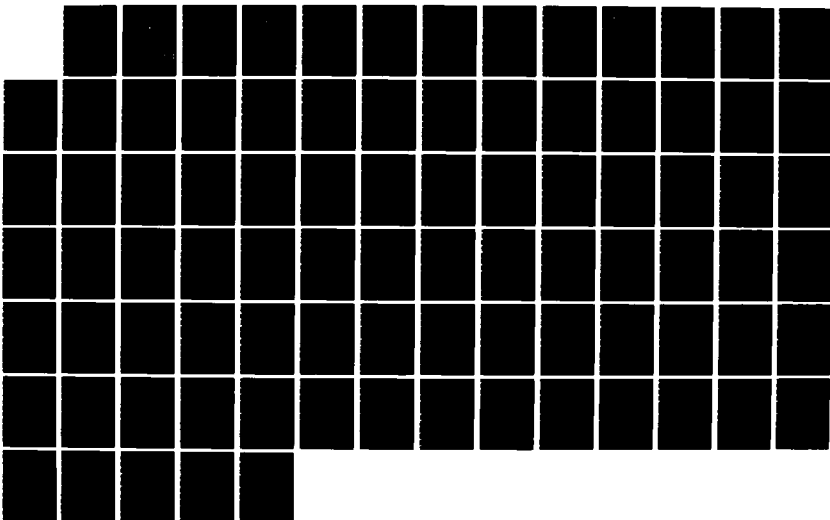AD-A166 694   JOB ATTITUDES OF AIR FORCE PLANT REPRESENTATIVE OFFICE   1/1
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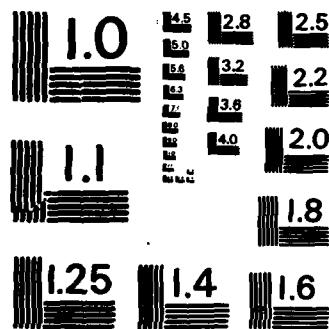   AFB AL   D L MASTIN APR 86 ACSC-86-1625

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┌─── **STUDENT REPORT** ───┐
Job Attitudes
of
Air Force Plant Representative Office
(AFPRO) Personnel
Major David L. Mastin   86-1625
└─── *"insights into tomorrow"* ───┘

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REPORT NUMBER 86-1625

TITLE JOB ATTITUDES OF AIR FORCE PLANT REPRESENTATIVE OFFICE
(AFPRO) PERSONNEL

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Submitted to the faculty in partial fulfillment of
requirements for graduation.

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This paper is an analysis of the Leadership and Management Development Center's Organizational Assessment Package (OAP) data comparing three groups: Air Force Contract Management Division's Air Force Plant Representative Office (AFPRO) personnel, Air Force Systems Command (AFSC) personnel, and Air Force data base personnel. The data were limited to officer and civilian personnel assigned within the continental United States. The anaysis includes discussion of 18 attitudinal factors and 22 demographic variables. The results indicated AFPRO personnel have consistently less positive attitudinal perceptions than either AFSC personnel or Air Force data base personnel.

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PREFACE

Job attitudes of military and civilian personnel are an important part of retaining personnel in both federal service and specific jobs. A person's job attitude is made up of many factors, and the comparison of those factors can help us better understand why a person or group of people are either more or less satisfied than another group.

This study was to see if there were significant differences in job attitudes among Air Force Contract Management Division personnel assigned to Air Force Plant Representative Offices, the rest of Air Force Systems Command personnel, and the remainder of Air Force personnel. Then, if there were differences, the study attempted to explain them.

The data used for this study is currently maintained by the Leadership and Management Development Center's (LMDC) Directorate of Research & Analysis at Maxwell AFB AL. However, before the end of 1986, the data will be transferred to the Air Force Human Resources Laboratory at Brooks AFB TX.

The format followed for this study was the Publication Manual of the American Psychological Association, with minor variations to meet LMDC's requirements. In addition, in the interest of brevity, the pronoun "he" was used in all discussions rather than the more cumbersome "he/she" although female personnel were an important part of the data.

The author is indebted to Major Mickey R. Dansby and Captain Richard H. Brown, Leadership and Management Development Center, Directorate of Research & Analysis, for their guidance and technical assistance.

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ABOUT THE AUTHOR

Major David L. Mastin has served in a wide variety of assignments in three career fields. He began his military career in 1972 as a missile launch officer at Whiteman AFB, Missouri in the Minuteman II weapon system. This was followed by an Air Force Institute of Technology Education With Industry assignment in 1977 to Rockwell International, Anaheim, California. After this training, Major Mastin was assigned to Detachment 46, Air Force Plant Representative Office TRW, Redondo Beach, California in 1978 as an Industrial Engineer and then in 1979 as the Manufacturing Division Chief. In 1981 he was assigned to Space Division, Los Angeles AFS, California as the Executive Officer to the Deputy for Contracting and subsequently in 1982 as a Systems Contract Negotiator on the Defense Support Program. In 1983 Major Mastin was transferred to Squadron Officer School at Maxwell AFB, Alabama where he was a Section Commander, Wing Chief, and Communications Skills Branch Chief.

Major Mastin received a Bachelor of Science degree in Engineering Management from the United States Air Force Academy in 1972. He also received a Master of Business Admininstration degree in Business Administration and Management from the University of Missouri in 1976 through the Minuteman Education Program. His military education includes Air Command and Staff College in residence and Squadron Officer School, where he was a distinguished graduate.

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"insights into tomorrow"

REPORT NUMBER   86-1625

AUTHOR(S)   MAJOR DAVID L. MASTIN, USAF

TITLE   JOB ATTITUDES OF AIR FORCE PLANT REPRESENTATIVE OFFICE (AFPRO) PERSONNEL

I. <u>Purpose</u>: To determine if there are significant differences in job attitudes for personnel in Air Force Plant Representative Offices (AFPRO) as compared to other personnel in Air Force Systems Command (AFSC) and to other Air Force personnel.

II. <u>Procedure</u>: Three steps were taken to meet the purpose of this study:
    (1) A literature review was conducted on major theories and current research on organizational behavior and job satisfaction. This was done to develop a basis to explain any significant differences found during the analysis of the data. For instance, Herzberg's two-factor theory discussed hygiene factors as environmental such as policies, working conditions, money, and security. These tend to eliminate dissatisfaction but do not motivate workers. Herzberg also discussed motivators such as recognition for accomplishment, increased responsibility, and professional growth and development and said these will motivate workers if the workers are otherwise satisfied through hygiene factors. He went on to say that using job enrichment to upgrade a person's responsibility, growth, and challenge of the job is the best motivator of all.

(2) Analyses were undertaken on both the demographic and attitudinal data of the three groups from the Air Force Leadership and Management Development Center's (LMDC) Organizational Assessment Package (OAP) survey. Statistical analyses of the data were conducted using standard inferential statistics (Analysis of Variance with Newman-Keuls follow-up) at the 95% confidence level.

(3) An interpretation of the factors having significant statistical differences among groups was then accomplished using the literature review and the author's experience as a basis for the explanation of the differences.

III. Data: The data for the analyses were taken from the LMDC's OAP data base and included 570 AFPRO respondents (37 officers and 533 civil service) from three AFPROs: Hughes, El Segundo, California; Aerojet, Sacramento, California; and Rockwell, North American Aircraft Operations, Los Angeles, California (including Palmdale and Columbus). There were 6,040 AFSC respondents (1,890 officers and 4,150 civilians) and 30,710 Air Force respondents (10,700 officers and 20,010 civilians). Only data collected from 1 October 1981 to 16 September 1985 and from respondents stationed within the continental United States were used. In addition, enlisted personnel were not considered due to their small number in AFPROs.

IV. Findings: The statistical analyses indicated AFPRO personnel expressed significantly less positive job attitudes than AFSC and Air Force personnel. Specifically, AFPRO personnel were statistically significantly lower on 9 of the 18 factors when compared with AFSC personnel. These factors were Task Characteristics, Job Related Training, Management and Supervision, Work Group Effectiveness, General Organizational Climate, Skill Variety, Task Significance, Job Feedback, and Need for Enrichment Index. AFPRO personnel were also statistically significantly lower on 11 of the 18 factors when compared with Air Force personnel. These factors were Job Performance Goals, Task Characteristics, Job Related Training, Organizational Communications Climate, Pride, Work Group Effectiveness, General Organizational Climate, Skill Variety, Task Identity, Task Significance, and Job Feedback. AFPRO

personnel were significantly more positive compared to Air Force personnel on only one factor: Need for Enrichment Index. AFPRO personnel were not significantly more positive than AFSC personnel on any factors.

V. Recommendations: To help increase AFPRO personnel's job attitudes, AFCMD leadership could:

   (1) Continue their current initiatives to increase the stature of AFCMD in the eyes of AFSC and the Air Force.

   (2) Focus more on motivators than hygiene factors in future initiatives.

   (3) Look into the feasibility of additional job enrichment for their personnel.

   (4) Upgrade local AFPRO training programs.

   (5) Ensure personnel fully understand AFCMD's mission and how it fits into the overall posture of our national defense.

Chapter One

INTRODUCTION

The purpose of this study is to provide the Air Force

Contract Management Division (AFCMD) an analysis of the

Leadership and Management Development Center's (LMDC)

Organizational Assessment Package (OAP) survey data. This

analysis compares results from OAP surveys for three groups to

assist AFCMD leaders in identifying overall attitudinal

strengths and potential personnel problem areas. Group 1

consists of AFCMD personnel; Group 2 is comprised of other Air

Force Systems Command (AFSC) personnel; and Group 3 consists of

other Air Force personnel surveyed by LMDC. The analyses

consider attitudes of officers and civilian personnel within the

three groups. Excluded from the analyses are enlisted personnel

data due to the small numbers at AFCMD detachments.

Why should we be concerned about studying job attitudes in

today's Air Force? As Lawrence J. Korb (1985), Assistant

Secretary of Defense, Manpower, Installations and Logistics,

points out, we cannot become complacent about our improved

manpower situation. As a matter of fact, the Air Force

retention rates peaked three years ago and have gradually

declined since then. In addition, the military-age population

in the United States will be 15% smaller by 1990 than it was in

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1980 (Correll, 1985). One way of lessening the impact of fewer potential recruits is to maintain high retention levels through increased job satisfaction.

AFCMD's personnel (specialists in engineering, contracting, manufacturing, subcontracts, quality assurance, and program management) are all located in contractor facilities and are all in relatively high demand in the defense contractor community. Because of this fact, AFCMD needs to be especially concerned with retention through increased job satisfaction. According to Richard A. Wheatt (personal communication, December 19, 1985), Special Assistant to the AFCMD Commander, in 1984 AFCMD had an average civilian personnel turnover rate of 25%. However, in the Los Angeles area, where there are seven of the twenty-four Air Force Plant Representative Offices (AFPROs), the average civilian turnover rate was 32%.

Since the OAP survey plays such an important part in this study, a brief discussion of the survey's history is appropriate. The idea for the survey originated in 1973 with the beginning of the all volunteer force (Short, 1985). In an effort to understand what makes the Air Force attractive, General David C. Jones (then Air Force Chief of Staff) established the Air Force Management Improvement Group (AFMIG) in 1975 to study the non-technical aspects of Air Force life. The results of AFMIG surveys indicated a need for leadership and management training. LMDC was created to fill this need.

Subsequently, the OAP survey was developed jointly by LMDC and the Air Force Human Resources Laboratory to help LMDC meet its mission. The LMDC survey format was based on the situational approach to leadership and management. In addition, the survey was designed to (a) help identify organizational leadership/management strengths and weaknesses, (b) provide feedback to Air Force Professional Military Education schools. and (c) provide a data base in support of Air Force-wide organizational effectiveness research efforts (Short, 1985). The ultimate goal of LMDC is to use the survey data to improve Air Force leadership/management and thereby increase motivation and productivity (Mahr, 1982). Over the years, the survey has evolved into a 109-item booklet (discussed in more detail in Chapter Three).

In order to better understand the OAP results for AFCMD and AFSC. one needs some appreciation of the scope of these organizations. AFCMD, headquartered at Kirtland Air Force Base. New Mexico, is part of AFSC and at the same organizational level as the four product divisions: Space Division, Aeronautical Systems Division, Electronic Systems Division, and the Armament Division. Its mission is to perform contract administration at all contractor plants assigned to the Air Force under the Department of Defense Plant Cognizance Program (USAF, 1984). Most of AFCMD's personnel are assigned to AFPROs located at assigned contractor facilities where they administer government contracts. AFCMD currently has 24 AFPROs scattered across the

United States (AFCMD, 1985). None of these AFPROs is collocated at any Air Force base. Examples of some of the larger AFPROs (over 200 personnel) include Rockwell International, Los Angeles, California; Boeing, Seattle, Washington: Hughes, El Segundo, California; Lockheed, Marietta, Georgia; General Dynamics, Fort Worth, Texas; and Westinghouse, Baltimore, Maryland. While AFCMD is responsible for contract administration, AFSC designs, constructs, tests, and purchases weapons and equipment and initial spare parts for Air Force operational and support commands. Primary emphasis in AFSC is given to aeronautical, space, electronic, missile and armament systems (Air Force Association, 1985). This work is done primarily by the four major product divisions listed above. All of these divisions and all other AFSC divisions, organizations, and centers are located at either an Air Force base or Air Force station.

In order to examine AFCMD job attitudes, this study pursues four objectives:

(1) To review relevant background research and organizational behavior literature to determine what previous researchers have learned about work attitudes, and to determine whether there are hypothesized or confirmed differences among AFCMD, AFSC, and other Air Force personnel;

(2) To compare OAP-measured demographic characteristics and job attitudes of officers and civilians in AFCMD with the attitudes of corresponding personnel in AFSC and in the Air

Force. The comparisons are made using descriptive and inferential statistics (Analysis of Variance [ANOVA] with Newman-Keuls follow-up);

(3) To analyze the statistically significant attitudinal differences among the AFCMD, AFSC, and other Air Force personnel; and

(4) To develop recommendations for AFCMD leadership.

The report addresses each of these goals in the following manner. First, Chapter Two reviews results of relevant background research. Chapter Three discusses the methodology used for this study, and includes an expanded explanation of the LMDC OAP attitude survey used to collect the data, and an explanation of the procedures used in computing and analyzing the data. Chapter Four provides the results from the data analysis, including demographic descriptions and attitudinal summary tables. Chapter Five is a discussion of the areas where there are statistically significant differences. Finally, Chapter Six presents a conclusion and recommendations for AFCMD.

Chapter Two

LITERATURE REVIEW

Research on related literature dealing with job attitudes
and job satisfaction revealed a considerable amount of
information on limited groups of Air Force people, especially
pilots and missilemen. However, there was no information found
dealing specifically with contract administration personnel and
only a few reports on related areas. Therefore, this chapter
first reviews some of the important background literature on
organizational management theory and then reviews a few studies
dealing with Air Force personnel.

There are two major groups of theories dealing with
motivation in organizations--content theories and process
theories (Hellriegel, Slocum, & Woodman, 1983). Content
theories focus on what specific things or actions motivate
people, such as higher salaries, better working conditions, and
better supervision. Process theories attempt to explain the
process of how people start, continue, or stop certain
behaviors, and is concerned with rewarding desired behavior to
increase the chances it will be repeated. The two major content
theories to be discussed are Maslow's need hierarchy theory and
Herzberg's two-factor theory. The major process theory to be

discussed is Porter and Lawler's basic expectancy theory. A
separate synopsis of each of these three theories follows.

The first major content theory Hellriegel et al. (1983)
discussed is Abraham H. Maslow's need hierarchy theory. In it
Maslow proposed that people had a complex set of needs which he
divided into five hierarchical categories. These five
categories are physiological, security, affiliation, esteem, and
self-actualization. Maslow also made four assumptions about his
hierarchy: (1) Satisfied needs do not motivate; (2) The needs
are very complex and a number of needs affect a person at any
one time; (3) Lower level needs must be satisfied before higher
level needs are addressed; and (4) There are more ways to
satisfy higher level needs than lower level needs. In other
words, Maslow's theory predicts a dynamic situation where a
continuously changing set of needs governs behavior (Hellriegel
et al., 1983).

A second major content theory, the two-factor theory, was
developed by Frederick Herzberg in the mid 1950's. This theory
stated that when people felt dissatisfied about their jobs they
were concerned about their environment. But when people felt
good about their jobs it had to do with the work itself (Hersey
& Blanchard, 1969). Herzberg called these two categories
hygiene factors and motivators respectively. The hygiene
factors were environmental and included company policies and
administration, supervision, working conditions, interpersonal
relations with other people on the job, money, status, and

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security. The motivators concerned the job itself and included feelings of achievement, recognition for accomplishment, challenging work, increased responsibility, and professional growth and development. For the interested reader, Herzberg (1966) offers a more detailed description of each of these factors.

Herzberg's two-factor theory fits in very well with Maslow's hierarchy of needs by showing how the hygiene factors fulfill the physiological, security, affiliation, and part of the esteem needs; and the motivators fill the rest of the esteem needs and all of the self-actualization needs (Hellriegel et al., 1983). However, Herzberg pointed out that hygiene factors, when satisfied, tend to eliminate dissatisfaction but do not motivate workers. Only satisfaction of the motivators will motivate workers. Herzberg then went on to say that the best motivator of all was to use job enrichment to upgrade a person's responsibility, growth, and challenge of the job. Although some people said Herzberg's two-factor theory was over-simplified, it has endured over the past 25 years and has played a prominent role in today's management of Air Force personnel (Boren, 1980).

Porter and Lawler's basic expectancy theory states that satisfaction is an effect rather than a cause of performance and that differential performance determines rewards, which produce satisfaction. Because of this, the theory emphasizes rewards and the processes of decision making. It also emphasizes that managers must take an active role in the subordinates'

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motivational process. In doing so, managers should match people to jobs and establish performance-reward contingencies. Finally, motivation will not lead to better performance unless the manager recognizes it and rewards it on a real time basis (Hellriegel et al.. 1983).

All three theories deal with job satisfaction, so it's not surprising that much has been written about how to increase job satisfaction using job enrichment. Job enrichment allows the employee more responsibility for planning, organizing, controlling, and evaluating his own work. Hellriegel et al. (1983) point out that employees whose jobs are enriched are better satisfied and therefore take greater interest in the quality of their work, resulting in fewer redos, lower material consumption, and improved customer satisfaction. In addition, employees have better job attitudes, which relate directly to lower turnover and less absenteeism. Job enrichment also leads to employee goodwill, both on and off the job, and to improved employee health. Still, job enrichment programs do fail, and when they do, job satisfaction decreases (Hellriegel et al., 1983). Some of the major causes cited for failure by Hellriegel et al. (1983) are managerial resistance, lack of organizational commitment, individual differences, technological constraints, and organizational climate. Organizational climate includes the degree of trust, communication, and support existing in an organization.

Because of failures using job enrichment techniques,

J. R. Hackman and G. R. Oldham developed a survey to measure

job dimensions to try to predict outcomes of job enrichment

(Hellriegel et al., 1983). Hackman and Oldham (1980) define

job enrichment to include five core job dimensions. They are

(1) skill variety--doing different things and using different

skills. abilities, and talents; (2) task identity--doing the

whole job from beginning to end; (3) task significance--the

degree the job has a meaningful impact on others in the

organization; (4) autonomy--gives the freedom, independence, and

discretion to the individual in scheduling the work and in

determining the procedures to be used; and (5) job feedback--the

clear and direct information about performance and job outcome.

When present, these five core job dimensions lead to three

psychological states--meaningfulness, responsibility, and

feedback--which eventually lead to greater job satisfaction. In

addition to their work on the survey, Hackman and Oldham (1980)

developed a formula so that an individual can develop his own

job profile. This formula can also be used to measure how

motivating or satisfying a job is, and therefore can be used to

help determine the individual's growth need.

Within the Air Force, there have been a number of studies

dealing with job attitudes, job satisfaction, and job

enrichment. For instance, in 1977 the Air Force Human Resources

Laboratory completed a handbook on job enrichment (Watson &

Zumbro). It went into great detail on how to redesign jobs

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using primary motivation, job stimulus conditions, worker perceptions, worker affective responses, and worker behavioral responses. Another handbook was completed the following year and goes into more detail of job redesign (Hendrick, 1978). The second handbook provides four examples of early Air Force job enrichment programs. One of these, Ogden Air Logistics Center, has some similarities with AFPROs. During the trial program at Ogden, Herzberg was brought in by the Air Force to be a consultant. The results of implementing Herzberg's recommendations were so favorable at Ogden that AFLC implemented the program at its four other air logistic centers.

Also in 1977, a study was done on job enrichment for engineering organizations (Purdy). Although AFPROs are not engineering organizations, they do include engineers. The study revealed four common causes for dissatisfaction among engineers in the field. They were (1) misutilization of talent, (2) lack of modular job design, (3) no project management responsibility, and (4) limited paths for growth into larger tasks.

In an Air Force-wide study in 1980, Boren looked at the job satisfaction levels of wage grade board civilians, general schedule civilians, and officers. He found that civilians, both the wage grade board and general schedule, had very positive job satisfaction levels while the officers had slightly less positive satisfaction levels. Boren (1980) further pointed out that his results verified the Air Force had used job enrichment

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successfully to increase the level of job satisfaction within these groups.

The next chapter discusses the methodology used to study AFCMD personnel's job attitudes in the present study, to include instrumentation, data collection, subjects, and procedures.

Chapter Three

METHODOLOGY

Instrumentation

LMDC's OAP was used to collect the data for this study
(Appendix C). The OAP consists of a computer-scored, 109-item
survey. Responses in the survey use a scale of 1 to 7, with a
value of "1" generally indicating strong disagreement or
dissatisfaction with the question or statement and a "7"
generally indicating strong agreement or satisfaction. The
exact meaning of each response is clearly indicated in the
introduction to each module of the survey (Short, 1985). The
survey consists of 16 demographic items and 93 attitudinal
items.

The OAP survey then groups items in the individual
attitudinal modules into factors, making the results more
reliable and interpretable. According to Short (1985) the
reliability for the primary OAP factors is acceptable to
excellent and all factors are strong, stable and consistent.

There are 13 key factors used in LMDC's consultation process
and they are grouped under three areas of organizational
functioning. The first area, Mission/Resources, includes the
factors of Job Performance Goals, Task Characteristics, Task

Autonomy, and Job Related Training. This area deals with the task properties and environmental conditions of the job. The second area, Leadership Effectiveness, includes the factors of Performance Barriers/Blockages, Management and Supervision, Supervisory Communications Climate, and Organizational Communications Climate. This area assesses the effectiveness of the supervisors and the process of accomplishing the work. The third area, Unit Effectiveness, includes the factors of Pride, Advancement/Recognition, Work Group Effectiveness, General Organizational Climate, and Job Related Satisfaction. This area measures task performance, group development, and effects on group members.

In addition, a fourth area, Job Enrichment, is considered important even though it does not contain any of the 13 key factors normally used in management consultation. It includes the factors of Skill Variety, Task Identity, Task Significance, Job Feedback, and Need for Enrichment Index. This area measures the degree to which the job itself is interesting, meaningful, challenging, and responsible.

Another important aspect of the OAP is its substantiated reliability and validity. Short (1985) described a previous paper he had done in 1981 that provided evidence of the factor-by-factor reliability of the OAP. During his study, he used the test-retest for stability and Cronbach's alpha for internal consistency. All the primary factors were shown to be reliable. In addition to reliability, Short pointed out the OAP validity

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was verified in a number of studies done by Conlon in 1980, Short and Wilkerson in 1981, and Webster in 1982. All the results clearly indicated a significant convergent validity for the OAP.

Data Collection

LMDC personnel collected the data used in this report in conjunction with management consultation visits to numerous Air Force organizations. Major unit commanders initiated the consultation process through a written request to LMDC. Once the request was approved, LMDC sent a team to the organization to administer the OAP survey over a one or two week period, depending on the size of the organization. The survey was given in a controlled environment in group sessions with all unit personnel present for duty given the opportunity to complete the survey. Furthermore, only LMDC consultants handled the surveys and complete anonymity was promised to unit personnel. LMDC also gathered complementary data while visiting the unit to round out their consultation. (Only the data gathered through the OAP survey were used in the present report.)

Although from an Air Force-wide perspective, the survey was an "opportunity sample," the data are representative of the bases where they were collected. All OAP survey responses collected are added to a cumulative data base of survey results maintained on a computer at Gunter Air Force Station, Alabama. This cumulative data base represents a large portion of the Air

Force population. (To ensure current data, this study uses only data collected from 1 October 1981 to 16 September 1985.)

After the initial data collection, LMDC personnel analyzed the data to determine the organizational strengths and weaknesses as viewed by the organizational personnel (Commander's Guide, 1983). They returned to the unit to validate the survey data and give specific feedback to supervisors. During this feedback process, confidentiality was maintained in regards to specific responses. LMDC also conducted workshops and seminars as required to train unit supervisors. Approximately four to six months after the feedback visit, another LMDC team returned to the unit to measure the progress of the organization. At this time, LMDC administered the OAP survey again, conducted interviews with selected managers, and collected key management indicators. After analyzing this new information, LMDC sent a confidential report on the follow-up results to the commander of the organization. (No data from second OAP administrations were included in this study.)

Subjects

The subjects for this study included active duty officers and Air Force civilian employees from three independent groups: AFPROs, AFSC, and other Air Force personnel. In addition, only data from subjects stationed within the continental United States were included. The subjects from the AFPROs included 37 officers and 533 civilians. These personnel were from three

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AFPROs: Aerojet, Sacramento, California; Hughes, El Segundo,
California; and Rockwell, North American Aircraft Operations,
Los Angeles, California (including the Palmdale and Columbus
organizations).

The AFSC subjects (excluding AFPRO personnel) included 1,890
officers and 4,150 civilians. These personnel were from 11
different bases including Andrews Air Force Base, Maryland;
Wright-Patterson Air Force Base, Ohio; Edwards Air Force Base,
California; Eglin Air Force Base, Florida; Norton Air Force
Base, California; Hanscom Air Force Base, Massachusetts; and Los
Angeles Air Force Station, California, among others.

Finally, the Air Force subjects (AFSC and AFPRO personnel
excluded) consisted of 10,700 officers and 20,010 civilians.
These personnel were from 80 different Air Force bases across
the country. Exact sample sizes vary from one OAP factor to
another due to some surveys being incomplete.

Procedures

The analyses of the three groups were conducted in two
separate comparisons. First is an analysis of demographics to
characterize the three sample groups. The second analysis is a
comparison of AFPRO personnel's job attitudes to those of AFSC
personnel and to those of the other Air Force personnel.

Analysis of Demographics

In this study, the LMDC data base was divided into three
groups: AFPROs, AFSC, and the Air Force. These groups were
then sub-divided into officers and civilians. The Statistical

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Package for the Social Sciences subprogram "Crosstabs" was used
to analyze the data.

Comparison of AFPRO, AFSC, and Air Force Personnel

For this comparison the LMDC data base was divided into the
same three major groups: AFPROs, AFSC, and Air Force. The
ANOVA procedure was used to determine whether the groups differed,
and the Newman-Keuls procedure was then used, where needed, as a
follow-up test to determine whether the specific differences
were higher or lower among the groups. These procedures were
used to indicate reliable differences with a 95% level of
confidence, meaning there is a 95% reliability the differences
did not occur by chance. In addition, these procedures were
used to determine which factors varied significantly among the
three sample groups. Comparisons were made in relation to the
four areas of organizational functioning: Mission/Resources,
Leadership Effectiveness, Unit Effectiveness, and Job
Enrichment.

The results of these procedures are in Chapter Four where
demograhpic and attitudinal data are provided in descriptive
paragraphs and in summary tables.

Chapter Four

RESULTS

This chapter presents the results of the statistical

analyses conducted on the OAP survey data. First are the

results from the analysis of demographics in descriptive

paragraphs, then the results from the comparisons of AFPRO,

AFSC, and Air Force personnel's job attitudes.

Analysis of Demographics

Tables A-1 through A-22, Appendix A, provide detailed

descriptive information on officer and civilian personnel in

AFPROs, AFSC, and the Air Force.

Officer Personnel

The description of a typical AFPRO officer respondent is

profiled. He has at least 8 years in service, over 18 months at

his present duty station, over 36 months in his career field,

and less than 18 months in his present position. The typical

AFPRO officer respondent is also married with his spouse

employed, and less than half of the responding officers hold

advanced degrees. Even though 40% of the respondents supervise

four or more people, the typical respondent is not a supervisor

and does not write performance reports. In addition, 36% report

their supervisors do not actually write their performance

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reports. Finally, 74% indicate they either will, or likely will, make the Air Force a career.

A typical AFSC officer respondent is very similar to an AFPRO officer respondent. He has more than 8 years in service, over 18 months at his present duty station, more than 36 months in his career field, and less than 18 months in his present position. The typical AFSC officer respondent is married with his spouse not employed, and 57% of the responding officers hold advanced degrees. Even though 29% of the respondents supervise four or more people, 56% of the respondents are not supervisors and 66% do not write performance reports. In addition, 17% report their supervisors do not actually write their performance reports. Finally, 67% indicate they either will, or likely will, make the Air Force a career.

The typical data base Air Force officer's demographics are very similar to both the AFPRO and AFSC officer respondents. He has more than 8 years in service, over 18 months at his present duty station, more than 36 months in his career field, and less than 12 months in his present position. The typical Air Force officer respondent is married with less than half of the spouses employed, while 46% of these officers hold advanced degrees. Even though 38% of the respondents supervise four or more people, 38% are not supervisors and 49% do not write performance reports. In addition, 13% report their supervisors do not actually write their performance reports. Finally, 75% indicate they either will, or likely will, make the Air Force a career.

Now that descriptions of the three groups of officers are
complete, demographic reviews are presented of the typical
civilian respondents from the three groups.

Civilian Personnel

A typical AFPRO civilian respondent is described first. At
the AFPROs, 55% of the respondents have more than 8 years
federal service and over 33% have more than 36 months at their
present duty stations. Most of them have 36 months in the career
field and 21% have been in their present positions more than 36
months. Over 57% of the respondents are married. In addition,
while 88% of the respondents have more than a high school
diploma, 37% have at least a bachelor's degree. Eighty-two
percent of them are not supervisors. Only 5% of the respondents
report their supervisors did not write their appraisals, while
11% were not sure who wrote their appraisals. More than 76% of
them either most likely, or definitely, plan to make the civil
service a career.

Next, the profile of the AFSC civilian respondents is
presented. Seventy-one percent have more than 8 years federal
service and over 72% have more than 36 months at their present
duty stations. Most of them have over 36 months in the career
field, and over 44% have been in their present positions more
than 36 months. More than 72% of the respondents are married.
In addition, while 80% of the respondents have more than a high
school diploma, 48% have at least a bachelor's degree. Seventy-
nine percent are not supervisors. Only 8% report their

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supervisors did not write their appraisals, while 10% were not sure who wrote their appraisals. More than 79% either definitely, or most likely, plan to make the civil service a career.

Last is a description of the data base Air Force civilians. Sixty-seven percent have more than 8 years federal service and over 63% have more than 36 months at their present duty stations. Most of them have over 36 months in the career field, and over 41% have been in their present positions more than 36 months. More than 76% of the respondents are married. In addition, 61% of the respondents have more than a high school diploma and 17% have at least a bachelor's degree. Sixty-seven percent are not supervisors. Only 10% report their supervisors did not write their appraisals, while 13% were not sure who wrote their appraisals. More than 81% either definitely, or most likely, plan to make the civil service a career.

In addition to these descriptions of typical officer and civilian respondents, there are some demographic differences that should be highlighted. First, 46% of the responding AFPRO civilians have been on station for less than 18 months. This compares to 16% in the AFSC group and 21% in the Air Force group. This, of course, results in the fact that more than 58% of the AFPRO civilian respondents have been at their present positions for less than 18 months while only 36% of the AFSC respondents and 39% of the Air Force data base respondents had been in their present positions for less than 18 months. An

additional characteristic that may contribute to the high
mobility of AFPRO respondents relative to AFSC and Air Force
respondents is that only 57% of civilian AFPRO respondents were
married compared to 72% for AFSC and 76% for Air Force
respondents.

Comparison of AFPRO, AFSC, and Air Force Personnel's Attitudes

Significant attitudinal differences were found to exist
between AFPRO personnel and AFSC personnel, and between AFPRO
personnel and Air Force personnel, in all four major areas:
Mission/Resources, Leadership Effectiveness, Unit Effectiveness,
and Job Enrichment (see Tables B-1 thru B-4, Appendix B). The
following paragraphs discuss attitudinal differences within
these areas.

AFPRO Personnel versus AFSC Personnel

Results of the ANOVA procedure indicate AFPRO personnel were
significantly different from AFSC personnel on 9 of the 18 OAP
factors which were considered for this analysis. These are
summarized (from Appendix B) in Table 1 (see next page). It
should be noted that AFPRO personnel expressed less positive
views on all nine of the significantly different factors.

In the Mission Resources area, AFPRO personnel reported
lower ratings on the Task Characteristics factor. This
indicates they are less satisfied than other AFSC personnel with
several aspects of their jobs. AFPRO personnel also rated Job
Related Training lower than AFSC personnel. This indicates they

are less satisfied with the technical and on-the-job training
they have received.

Table 1

Summary of AFPRO-AFSC Significant Differences

Area	AFPRO	AFSC	Diff
Mission/Resources			
Task Characteristics	5.10	5.19	-.09
Job Related Training	4.15	4.43	-.28
Leadership Effectiveness			
Management and Supervision	4.99	5.14	-.15
Unit Effectiveness			
Work Group Effectiveness	5.38	5.70	-.32
General Organizational Climate	4.63	4.79	-.16
Job Enrichment			
Skill Variety	5.02	5.18	-.16
Task Significance	5.30	5.44	-.14
Job Feedback	4.80	4.91	-.11
Need for Enrichment Index	5.89	5.98	-.09

In the area of Leadership Effectiveness, AFPRO personnel
rated the Management and Supervision factor lower than other
AFSC personnel. This indicates their perceptions of their
supervisors are not as favorable as AFSC personnel's perceptions
of their supervisors.

The third area is Unit Effectiveness, with AFPRO personnel
lower than other AFSC personnel on two factors. First, the Work
Group Effectiveness factor was significantly lower. This
indicates the AFPRO personnel thought their productivity was
lower than AFSC personnel. The second factor rated lower was
General Organizational Climate. This indicates AFPRO
personnel's perceptions of their organizational environment are

not as favorable as the perceptions of the rest of AFSC's
personnel.

Finally, in the Job Enrichment area, four factors showed
significant differences. AFPRO personnel indicated they
perceived their jobs required less Skill Variety than AFSC
personnel. The AFPRO personnel also reported their jobs were
less significant than other AFSC personnel and they receive less
feedback on their job performance. Additionally, AFPRO
personnel indicated a stronger desire to have their jobs
enriched than AFSC personnel.

AFPRO Personnel versus Air Force Personnel

Results of the ANOVA procedure indicate AFPRO personnel were
significantly different from other Air Force personnel on 12 of
the 18 OAP factors which were considered for this analysis.

Table 2

Summary of AFPRO-AF Significant Differences

Area	AFPRO	AF	Diff
Mission/Resources			
Job Performance Goals	4.61	4.85	-.24
Task Characteristics	5.10	5.35	-.25
Job Related Training	4.15	4.57	-.42
Leadership Effectiveness			
Organizational Comm Climate	4.48	4.74	-.26
Unit Effectiveness			
Pride	5.15	5.50	-.35
Work Group Effectiveness	5.38	5.69	-.31
General Organizational Climate	4.63	4.96	-.33
Job Enrichment			
Skill Variety	5.02	5.21	-.19
Task Identity	5.22	5.32	-.10
Task Significance	5.30	5.81	-.51
Job Feedback	4.80	5.02	-.22
Need for Enrichment Index	5.89	5.80	+.09

These are summarized (from Appendix B) in Table 2. AFPRO
personnel expressed less positive views on 11 of these factors
and a more positive view on only one factor.

In the Mission/Resources area, the AFPRO personnel were
lower in three key factors. First, the Job Performance Goals
factor indicates they feel their job performance goals are not
as clear, specific, or realistic as the other Air Force
personnel. The second key factor rated lower was Task
Characteristics. This indicates AFPRO personnel are less
satisfied with their jobs. The third factor in the
Mission/Resources area rated lower was Job Related Training.
This indicates personnel are less satisfied with the technical
and on-the-job training they have received.

The second major area, Leadership Effectiveness, had only
one key factor, Organizational Communications Climate, rated
significantly lower by AFPRO personnel. This indicates the
AFPRO personnel feel management is not as responsive to their
needs as other Air Force personnel view their management.

The third major area, Unit Effectiveness, had three factors
rated significantly lower for AFPRO personnel as compared to Air
Force personnel. First, AFPRO people have a lower feeling of
Pride in their jobs. Second, AFPRO personnel perceive their Work
Group Effectiveness is lower. This relates to the quality and
quantity of their work group output. General Organizational
Climate was the third factor rated significantly lower in the
unit effectiveness area. This indicates AFPRO personnel feel

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their organizations are not interested in them as much as Air Force personnel think their organizations are.

In the last major area, Job Enrichment, all five factors were significantly different between the groups. AFPRO personnel indicated they perceived their jobs required less Skill Variety than other Air Force personnel. They found their Task Identity, or their perception of how much of a complete work unit they perform, was lower than for Air Force personnel. Furthermore, their perceptions of the Task Significance of their jobs were significantly lower than those of Air Force personnel. Finally, AFPRO personnel felt they received less feedback than Air Force personnel on job performance. However, in the Need for Enrichment Index factor, AFPRO personnel had less desire than the Air Force personnel to have their jobs enriched.

In summary, AFPRO personnel were statistically significantly less positive than either AFSC or Air Force personnel in all major areas. Table 3 (on next page) shows the summary of the four areas and the 18 factors. The "-" or "+" indicates either a negative or positive significant statistical difference in the given factor in comparison with the indicated group. For detailed information on the results for these factors please refer to Appendix B.

Specifically, AFPRO personnel were less positive than both AFSC and Air Force personnel on seven factors: Task Character- istics, Job Related Training, Work Group Effectiveness, General Organizational Climate, Skill Variety, Task Significance, and

Table 3

Summary of Significant Differences

Factor	AFPRO/AFSC	AFPRO/AF
Mission/Resources		
Job Performance Goals		-
Task Characteristics	-	-
Task Autonomy		
Job Related Training	-	-
Leadership Effectiveness		
Performance Barriers/Blockages		
Management and Supervision	-	
Supervisory Comm Climate		
Organizational Comm Climate		-
Unit Effectiveness		
Pride		-
Advancement/Recognition		
Work Group Effectiveness	-	-
Gen Organizational Climate	-	-
Job Related Satisfaction		
Job Enrichment		
Skill Variety	-	-
Task Identity		-
Task Significance	-	-
Job Feedback	-	-
Need for Enrichment Index	-	+

Job Feedback. Also, AFPRO personnel were less positive than

AFSC personnel (only) in two other factors: Management and

Supervision and Need for Enrichment Index. In addition, AFPRO

personnel were less positive than Air Force personnel (only) in

four other factors: Job Performance Goals, Organizational

Communications Climate, Pride, and Task Identity. On the other

hand, AFPRO personnel were significantly more positive than Air

Force personnel (only) in one factor: Need for Enrichment Index.

(The results also show AFSC personnel were statistically

significantly less positive than Air Force personnel in 10

factors and more positive in only two factors.'

It is obvious there is a general trend for AFPRO personnel to be less satisfied than AFSC personnel and AFSC personnel to be less satisfied than Air Force personnel. Although the results seem quite significant, they can not stand alone without discussion of them. The next chapter discusses the significant results and relates them to the motivation theories discussed earlier and the realities of the AFPRO work environment.

Chapter Five

DISCUSSION

The purpose of this study is to provide AFCMD leadership an
analysis of LMDC's OAP survey data by identifying important
demographic differences and discussing how AFCMD's respondents
perceived their overall job attitudes as compared to other AFSC
and other Air Force respondents. AFCMD leadership may use this
analysis to determine if policy or program changes should be
made to increase favorability of job attitudes among AFCMD
personnel.

Demographics

In the area of demographics, the high mobility of the AFPRO
work force was highlighted. Specifically, even though the ages
of the personnel in the three groups were very close, AFPRO
respondents had significantly less time in the Air Force than
the other two groups. For instance, 26% of the AFPRO personnel
had less than 3 years in the Air Force while only 13% of the
AFSC respondents and 16% of the Air Force respondents had less
than 3 years. Furthermore, the AFPRO personnel had less time at
their current duty stations and in their current jobs. While
46% of the AFPRO personnel had been at their duty stations for
less than 18 months, only 16% of the AFSC personnel and 21% of

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the Air Force personnel had been at their duty stations less than 18 months. Also, 58% of the AFPRO personnel had been in their present positions for less than 18 months, compared to only 36% for the AFSC personnel and 39% for the Air Force personnel. The last factor, which may impact the mobility of the AFPRO workforce, is that 37% of them are not married. This compares to 20% for the AFSC personnel and 18% for the Air Force personnel.

These demographics must be balanced with the fact that two of the three AFPROs in the sample were in the Los Angeles area which experiences a much higher turnover rate than AFCMD in general. This may be a major factor in the lower attitudinal differences of AFPRO respondents as compared to AFSC and Air Force respondents.

Attitudinal Differences

The results of the attitudinal differences were not encouraging. AFPRO respondents had consistently less positive job attitudes than either AFSC or Air Force respondents. Because of the number of factors which are statistically significantly different, the discussion of the attitudinal differences will be presented by the four major areas of organizational functioning.

Mission/Resources

Within this area, Job Related Training had the second lowest mean of the 18 factors examined. So even though the AFPRO respondents were significantly lower than the other two groups, those groups were also relatively low compared to their other

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factors. Job Related Training is made up of both technical and on-the-job training. With the high turnover experienced in AFCMD, and especially in the Los Angeles area, it is understand-able this factor would be rated low. According to Lt Col Larry E. Bost, Deputy Director of Plans at AFCMD, the command normally receives about 45% of the slots for technical courses needed to complete their annual training requirements (personal communication, February 28, 1986). The problem of on-the-job training is also compounded by the high turnover because the experienced people are often too busy with their primary work to teach someone new how to do the job. If an individual is not properly trained, either through technical or on-the-job training, there is little chance he can be motivated, or become motivated, according to Herzberg's two-factor theory motivators. An individual must understand the fundamentals of a job before he reaches out for those motivators such as more challenging work, increased responsibility, or professional growth and development. Nor is there a very good chance that individual would become satisfied according to the Porter and Lawler's basic expectancy theory because satisfaction is thought to be an effect, rather than a cause, of performance.

Another factor in the Mission/Resources area on which AFPRO respondents were significantly lower than both AFSC and Air Force respondents was Task Characteristics. This factor is basically a combination of the Job Enrichment area factors which had the highest mean of the four areas. AFPRO respondents also

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rated this factor a full half point higher than any of the other factors in this area.

The third and last factor rated significantly lower by the AFPRO personnel in this area was Job Performance Goals. This factor, which measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging was also rated very low by the AFSC respondents. There are few checklists to follow at the AFPROs as there are in many parts of the Air Force because other than in the quality assurance area, AFPRO work tends not to be checklist oriented. The high turnover rate influences this factor because it is hard to set meaningful goals for trainees in an unstructured environment.

Leadership Effectiveness

AFPROs were only statistically different once from each group in this area. They were significantly different in the Organizational Communications Climate comparison with Air Force respondents. This factor measures the workers perceptions of open communications in the organization and that adequate information is provided to accomplish the job. When there is a 15:1 ratio of civilian to military personnel, coupled with the fact that the working environment is in a contractor's facility, it is not hard to understand that many of the civilians may not feel they are in a military organization. However, every AFPRO is a military organization and has a military commander and deputy commander (except for two AFPROs) and tend to be more structured than civilian organizations.

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AFPRO respondents also had a significant difference from
AFSC respondents in the Management and Supervision factor. This
factor had the highest mean in the area and with each group. The
difference, even though statistically significant, probably is
not practically significant when the ratio of civilian to
military is considered in light of the Los Angeles location of
two of the sample AFPROs.

Unit Effectiveness

The area of Unit Effectiveness had two factors in which
AFPRO respondents were significantly different from both AFSC
and Air Force respondents, and one factor for which they were
significantly different from just the Air Force respondents.
In addition, the factor of Advancement/Recognition will be
discussed.

Even though the AFPRO respondents rated the Work Group
Effectiveness factor very high, they were still significantly
lower than both AFSC and Air Force respondents. This factor
measures their perceptions of the work group's productivity. It
is understandable with the high turnover rate that this would be
rated lower than the other two groups. However, it is
surprising it is rated so high by the AFPRO respondents. This
indicates the work groups are maintaining some cohesiveness even
with the high turnover.

The General Organizational Climate factor was the second
factor in this area for which AFPRO respondents were
significantly different from both AFSC and Air Force

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respondents. This factor measures the individual's perception of the organizational environment, to include the organization's commitment, communications, and organizational pride. The perceptions of the AFPRO respondents indicate that, even though the smaller work groups are maintaining some cohesiveness, the organizations as a whole are not. Again, even with the high turnover rate, workers have the opportunity to get to know the people in their work areas, but find it difficult to relate to all the new people in the organization, thus causing a lower perception of the overall organizational environment.

AFPRO respondents were also significantly different from the Air Force data base in the factor of Pride (AFSC respondents were also significantly lower than the Air Force data base in this factor). This may go back to the basic mission of the Air Force. The Air Force data base is more operationally oriented than either AFSC or AFCMD. While AFCMD provides contract administration support to the AFSC product divisions, it is also a separate equal organization with its own mission.

Although there was not a statistical difference between the three groups in the Advancement/Recognition factor, it should be noted because it had the lowest mean of all 18 factors across all four areas. All three theories discussed in Chapter Two point out that individuals will not be satisfied or motivated unless they feel their work is recognized and they are given the opportunity to advance. This is tied very closely to the Job

Related Training factor which had the second lowest mean average
(just above Advancement/Recognition) of all the factors.

Job Enrichment

The final area of Job Enrichment had four of the five
factors significantly different between AFPRO respondents and
both AFSC and Air Force respondents. In the fifth factor, Task
Identity, AFPRO respondents were significantly different from
only the Air Force data base. Regardless of the differences,
this area had the highest means of the four areas. Also, this
area had the only factor, Need for Enrichment Index, in which
the AFPRO respondents were positively significantly different
from both comparison groups.

The Task Significance factor had the largest difference in
means for any factor in the comparison between the AFPRO
respondents and the Air Force data base. Again, this may relate
to the fact that the AFPROs provide contract administration
support to AFSC, while the Air Force data base has many opera-
tional organizations in it. It should be noted that the dif-
ference between the means for the AFSC respondents and the Air
Force data base was also the largest difference between those
two groups. This supports the idea that personnel in nonopera-
tional jobs have a much lower perception of the significance
of their jobs relative to the main stream of the Air Force.

AFPRO respondents also were significantly lower than both
AFSC and Air Force respondents in the Skill Variety factor. This
factor measures the extent to which the job requires a person to

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do different things and use [illegible] skills. It is
not surprising this factor was [illegible] with the high
turnover rate of the AFPROs be [illegible] tend to be less
able to handle variation in the [illegible] experienced
workers.

The third factor rated significantly lower by the AFPRO
respondents, compared to the AFSC respondents and the Air Force
data base, was Job Feedback. Porter and Lawler's basic
expectancy theory points out that managers must take an active
role in the subordinates' motivational process. This is even
more important with new employees who are unsure of themselves
on the job. Because of the turnover rate, many of the AFPRO
respondents fall in the category of needing more feedback than
an average employee.

Finally, the AFPRO respondents, as expected, had their
highest mean in the Need for Enrichment Index factor. This
factor also had the highest overall mean and it was the only
factor for which the AFPRO respondents were significantly more
positive than the Air Force data base. This shows a strong
desire for personal growth on the job. The turnover rate also
affects this factor. Many of the employees are in training
programs and are looking for opportunities to move ahead at a
more rapid pace.

In summary, it is clear AFPRO respondents were less positive
overall in their job attitudes than either AFSC respondents or
Air Force respondents. The high turnover rate experienced by

AFCMD is both a cause and an effect of the lower job attitudes. However, AFCMD is taking actions to increase their personnel's job attitudes. These actions and some other possible actions that could be taken are discussed in the next chapter.

Chapter Six

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study indicates AFCMD is faced with a potentially
serious problem with the overall less favorable job attitudes of
their personnel. The statistical analysis pointed out a clear
trend of lower perceived satisfaction when the AFPRO respondents
were compared to AFSC and Air Force data base respondents. A
basic contributor is the high civilian turnover rate experienced
by the division which seemed to act as both a cause, and an
effect, of the less favorable job attitudes. However, in light
of the recent publicity government buying agencies have received,
one could assume the differences between the AFPRO personnel and
AFSC personnel might not currently be as great as this study
reflects.

AFCMD personnel are involved in a number of programs to
increase the favorability of their people's job attitudes.
Some of these programs are in the area Herzberg called
the "hygiene factors," which are not thought to motivate
individuals nor increase their job satisfaction; rather, hygiene
factors only lessen dissatisfaction and maintain the status quo.
For example, in the Los Angeles area, clerical workers are paid

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a special higher rate than other clerical workers around the country. Since money is considered a hygiene factor which does not increase job satisfaction, the result is having clerks staying on the job for the money and not for the satisfaction they get from the job. Another example is flexitime, a policy generally considered a hygiene factor, which normally does not increase the employee's overall job satisfaction unless it increases job autonomy. However, it needs to be pointed out that the use of hygiene factors are necessary to maintain a certain level of satisfaction but they are not sufficient to increase job satisfaction.

On the other hand, some initiatives by AFCMD to help increase job satisfaction seem to be on the right track. For instance, the command is starting a Professional Development Office to train new employees in AFCMD "unique" courses. If this program is large enough it could have a substantial positive impact on a number of attitudinal factors previously discussed. AFCMD also has a relatively new Directorate of Information Systems which is chartered to increase the quality and accuracy of automated information to and from the AFPROs. This should help clear up some of the problems in dealing with such a variety of contracting organizations.

Nonetheless, the data does reflect a perception that AFPRO personnel are the least satisfied of the three groups in this study. Although the differences were not as great, the fact that the AFPRO respondents were consistently lower than the AFSC

respondents in their job attitudes is more serious than the
AFPRO differences between the Air Force respondents. AFPROs
basically compete for the same civil service personnel as the
rest of AFSC, although the grade average in the AFPROs is
slightly less than other AFSC activities. To better compete and
to better maintain their current personnel, AFCMD must improve
their personnel's job attitudes. To this end, strong
leadership, especially at the AFPRO level, is essential. As
Peters and Waterman (1982) pointed out in their book
In Search of Excellence, "associated with almost every
excellent company was a strong leader" (p. 26). Leadership
can help make a difference in increasing the overall job
satisfaction levels of the AFPROs and the command.

Recommendations

After concluding this study, the author recognized the
need to increase the general satisfaction levels of job
attitudes for AFCMD personnel. Although this presents a
substantial task to AFCMD, it must be done since people are
truly the command's most valuable resource. Based on this study,
and from the author's perspective after serving at an AFPRO for
three years, the following recommendations are presented to
AFCMD leadership:

(1) Continue their current initiatives to increase the
stature of AFCMD in the eyes of AFSC and the Air Force.

(2) Focus more on motivators than hygiene factors in future
initiatives.

(3) Look into the feasibility of additional job enrichment for their personnel.

(4) Upgrade local AFPRO training programs.

(5) Ensure personnel fully understand AFCMD's mission and how it fits into our overall national defense posture.

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APPENDIX

APPENDIX A

Analysis of Demographic Information

Appendix A

Table A-1

Number of Respondents by Personnel Category

	n=	AFPRO (570)	AFSC (6,040)	AF (30,708)
Officer		37	1,889	10,698
Civilian		533	4,151	20,010

Table A-2

Sex by Personnel Category

		AFPRO		AFSC		AF	
		Male(%)	Female(%)	Male(%)	Female(%)	Male(%)	Female(%)
	n=	359	209	3,813	2,195	21,480	9,023
Officer		8.9	2.9	40.1	16.2	44.0	13.4
Civilian		91.4	97.1	59.9	83.8	56.0	86.6

Table A-3

Age by Personnel Category

		AFPRO		AFSC		AF	
		Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
	n=	37	533	1,889	4,151	10,698	20,004
17 to 20 Yrs		0.0	1.1	0.0	0.7	0.0	1.3
21 to 25 Yrs		27.0	5.4	17.9	4.9	11.1	6.5
26 to 30 Yrs		18.9	9.9	22.1	8.9	29.1	10.9
31 to 35 Yrs		24.3	11.3	18.9	12.5	24.2	14.9
36 to 40 Yrs		18.9	12.4	19.5	15.3	19.6	13.8
41 to 45 Yrs		8.1	14.4	13.9	13.1	10.5	12.4
46 to 50 Yrs		2.7	13.5	4.9	16.9	3.3	13.4
> 50 Years		0.0	31.9	1.8	27.8	2.2	26.8

Note: The number "n" is the total number of valid responses in the pre-intervention data base for the variable being examined.

Table A-4

Time in Air Force

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	526	1,889	3,820	10,677	17,539
< 1 Yr	2.7	10.6	7.4	4.6	2.5	5.1
1 to 2 Yrs	5.4	7.0	8.5	4.0	4.7	5.3
2 to 3 Yrs	10.8	8.0	7.1	4.0	7.7	5.4
3 to 4 Yrs	5.4	5.7	6.8	4.5	7.3	5.0
4 to 8 Yrs	21.6	14.1	16.2	11.4	22.7	11.8
8 to 12 Yrs	13.5	12.4	13.4	12.9	16.8	12.4
> 12 Years	40.5	42.2	40.6	58.7	38.3	55.0

Table A-5

Months in Present Career Field

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	525	1,880	4,086	10,618	19,434
< 6 Mos	5.4	9.0	6.3	4.4	5.0	5.8
6 to 12 Mos	0.0	9.0	7.8	5.3	7.6	7.7
12 to 18 Mos	10.8	6.3	8.3	4.5	7.7	6.3
18 to 36 Mos	21.6	16.0	19.1	11.2	22.0	13.9
> 36 Mos	62.2	59.8	58.4	74.5	57.7	66.3

Appendix A

Table A-6

Months at Present Duty Station

	AFPRO		AFSC		AF	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	36	526	1,886	4,078	10,663	19,522
< 6 Mos	25.0	17.5	12.9	9.4	14.0	6.2
6 to 12 Mos	8.3	16.5	15.1	6.0	16.8	8.0
12 to 18 Mos	25.0	12.4	17.0	4.4	16.3	6.4
18 to 36 Mos	27.8	20.5	31.7	11.6	36.8	15.8
> 36 Mos	13.9	33.7	23.3	78.6	16.2	63.6

Table A-7

Months in Present Position

	AFPRO		AFSC		AF	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	527	1,884	4,114	10,653	19,636
< 6 Mos	35.1	21.6	22.0	13.1	27.2	13.6
6 to 12 Mos	10.8	21.6	22.3	13.7	25.1	14.8
12 to 18 Mos	24.3	15.2	19.4	9.6	16.6	10.3
18 to 36 Mos	24.3	19.7	27.9	19.4	24.1	19.7
> 36 Mos	5.4	21.8	8.3	44.1	6.9	41.3

Table A-8

Ethnic Group

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	36	522	1,878	4,104	10,645	19,584
White	77.8	70.1	87.0	79.3	87.7	64.6
Black	11.1	12.5	5.9	8.8	5.8	9.6
Hispanic	2.8	7.9	2.6	7.7	2.3	18.2
Amer Ind/Alask	2.8	1.5	0.9	1.0	0.7	1.4
Asian/Pac Is	2.8	6.7	1.7	1.4	1.4	3.0
Other	2.8	1.3	1.9	1.8	2.1	3.2

Table A-9

Marital Status

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	528	1,887	4,142	10,589	19,950
Not Married	32.4	37.3	24.3	19.9	20.5	17.8
Married	67.6	57.4	73.9	72.7	78.0	76.4
Single Parent	0.0	5.3	1.8	7.4	1.5	5.8

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Table A-10

Spouse Status: AFPRO

	Geographically Separated		Not Geo. Separated	
	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	1	27	24	276
Civilian Employed	100.0	85.2	62.5	63.4
Not Employed	0.0	14.8	29.2	35.9
Military Member	0.0	0.0	8.3	0.7

Table A-11

Spouse Status: AFSC

	Geographically Separated		Not Geo. Separated	
	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	56	153	1,339	2,857
Civilian Employed	48.2	73.9	38.6	58.5
Not Employed	21.4	13.1	50.9	36.2
Military Member	30.4	13.1	10.5	5.3

Table A-12

Spouse Status: AF

	Geographically Separated		Not Geo. Separated	
	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	369	889	7,968	14,353
Civilian Employed	60.4	67.8	33.4	53.1
Not Employed	19.8	18.6	58.3	33.9
Military Member	19.8	13.6	8.4	13.0

Table A-13

Educational Level

	----AFPRO----		----AFSC----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	531	1,883	4,121	10,670	19,706
HS Grad or GED	0.0	11.3	0.1	19.3	0.3	38.2
< 2 Yrs College	0.0	24.3	0.2	18.5	0.3	25.0
> 2 Yrs College	0.0	26.6	1.6	13.6	1.3	19.1
Bachelors Deg	51.4	28.1	41.6	28.2	55.0	12.2
Masters Deg	43.2	9.2	41.7	17.6	36.2	4.7
Doctoral Deg	5.4	0.6	14.8	2.8	6.9	0.7

Table A-14

Professional Military Education

	----AFPRO----		----AFSC----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	21	103	1,077	516	7,170	4.653
None	43.2	80.7	43.0	87.5	32.9	76.6
Phase 1 or 2	0.0	4.3	1.2	2.5	1.0	8.6
Command Academy	0.0	6.2	1.5	2.0	2.2	7.0
Sr NCO Academy	0.0	2.3	0.1	1.0	0.2	2.2
SOS	27.0	1.3	18.2	1.8	28.2	0.9
Int Ser Sch	16.2	3.6	19.8	2.8	23.9	3.5
Sr Ser Sch	13.5	1.7	16.4	2.2	11.6	1.1

Table A-15

Number People Directly Supervised

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	34	453	1,754	3,453	10,086	16,403
None	50.0	82.3	56.4	79.4	38.4	67.3
1 Person	2.9	1.1	6.0	2.2	7.5	3.1
2 People	2.9	0.9	3.1	2.0	7.0	2.7
3 People	2.9	0.9	5.2	2.3	8.5	2.9
4 to 5 People	11.8	4.0	11.9	4.7	14.1	5.6
6 to 8 People	11.8	5.5	8.2	4.3	10.5	4.6
9 or > People	17.6	5.3	9.2	5.0	14.0	13.8

Table A-16

Number People for Whom Respondent Writes APR/OER/Appraisal

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	533	1,885	4,142	10,667	19,944
None	51.4	83.9	66.1	85.0	48.8	77.3
1 Person	5.4	1.5	5.5	1.6	10.0	2.2
2 People	5.4	0.8	3.1	1.5	7.7	2.0
3 People	0.0	0.9	5.0	1.8	7.6	2.1
4 to 5 People	10.8	3.9	8.8	3.4	11.8	4.0
6 to 8 People	10.8	5.3	6.6	3.5	8.8	3.0
9 or > People	16.2	3.8	5.0	3.2	5.4	9.3

Table A-17

Supervisor Writes Respondent's APR/OER/Appraisal

| | -----AFPRO---- | | -----AFSC----- | | ------AF------ | |
| | Off(%) | Civ(%) | Off(%) | Civ(%) | Off(%) | Civ(%) |
n=	36	517	1,868	4,028	10,531	19,290
Yes	58.3	83.6	72.5	81.6	78.6	76.9
No	36.1	5.0	17.3	8.3	13.5	9.9
Not Sure	5.6	11.4	10.1	10.2	7.9	13.2

Table A-18

Work Schedule

| | -----AFPRO---- | | -----AFSC----- | | ------AF------ | |
| | Off(%) | Civ(%) | Off(%) | Civ(%) | Off(%) | Civ(%) |
n=	37	525	1,870	4,065	10,589	19,544
Day Shift	91.9	94.1	74.5	93.1	56.3	86.7
Swing Shift	0.0	1.5	0.2	0.8	0.2	3.8
Mid Shift	0.0	0.4	0.1	0.2	0.1	0.9
Rotating Shift	0.0	2.3	7.5	1.5	4.3	5.2
Irregular Shift	5.4	1.1	10.0	1.7	13.0	2.4
Freq TDY/On-Cal	2.7	0.4	7.5	2.5	8.1	0.6
Crew Schedule	0.0	0.2	0.1	0.1	18.0	0.4

Appendix A

Table A-19

Supervisor Holds Group Meetings

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	36	522	1,971	4,079	10,565	19,692
Never	2.8	7.9	5.9	9.8	6.7	10.2
Occasionally	19.4	36.0	26.6	42.0	22.4	33.1
Monthly	5.6	9.4	15.4	9.1	13.8	20.9
Weekly	58.3	37.7	40.2	34.4	42.5	29.3
Daily	8.3	6.9	10.6	3.0	12.5	4.7
Continuously	5.6	2.1	1.3	1.7	2.2	1.8

Table A-20

Supervisor Holds Group Meetings to Solve Problems

	-----AFPRO----		-----AFSC-----		------AF------	
	Off(%)	Civ(%)	Off(%)	Civ(%)	Off(%)	Civ(%)
n=	37	512	1,857	4,018	10,511	19,430
Never	18.9	20.7	18.7	24.6	14.7	24.2
Occasionally	43.2	45.9	41.8	46.2	42.7	44.4
Half the Time	21.6	18.2	21.8	15.5	21.9	15.3
Always	16.2	15.2	17.7	13.7	20.7	16.1

Table A-21

Aeronautical Rating and Current Status

		AFPRO Off(%)	AFSC Off(%)	AF Off(%)
	n=	36	1,888	10,529
Nonrated, not on aircrew		88.9	86.9	56.4
Nonrated, now on aircrew		2.8	0.7	2.7
Rated, on crew/opr job		2.8	0.8	32.0
Rated, in support job		5.6	11.5	9.0

Table A-22

Career Intent

		AFPRO Off(%)	AFPRO Civ(%)	AFSC Off(%)	AFSC Civ(%)	AF Off(%)	AF Civ(%)
	n=	34	427	1,883	3,684	10,637	17,084
Retire 12 Mos		5.9	4.0	5.0	5.0	3.1	6.6
Career		55.9	46.1	46.9	48.4	51.8	52.1
Likely Career		17.6	26.2	20.6	25.9	22.8	22.8
Maybe Career		14.7	14.3	17.5	14.7	14.6	12.2
Likely Separate		5.9	5.2	6.4	3.0	4.8	3.5
Separate		0.0	4.2	3.6	3.0	2.9	2.7

APPENDIX

APPENDIX B

Comparison of AFPRO Personnel

to

AFSC Personnel and LMDC Data Base

Table B-1

AFPRO vs AFSC vs AF Personnel

Mission Resources

Factors	Mean	SD	Subset	df	F
Job Performance Goals				2,35623	110.83***
AFPROs	4.61	1.03	1		
AFSC	4.64	1.02	1		
AF	4.85	.99	2		
Task Characteristics				2,35412	89.01***
AFPROs	5.10	1.04	1		
AFSC	5.19	.99	2		
AF	5.35	.94	3		
Task Autonomy				2,35909	19.7?***
AFPROs	4.63	1.89	1,2		
AFSC	4.67	1.31	2		
AF	4.55	1.36	1		
Job Related Training				2,31812	31.28***
AFPROs	4.15	1.71	1		
AFSC	4.43	1.09	2		
AF	4.57	1.02	3		

NOTE: Groups not in the same subset are significantly different at the .05 level.

*p < .05. **p < .01. ***p < .001.

Table B-2

AFPRO vs AFSC vs AF Personnel

Leadership Effectiveness

Factors	Mean	$\underline{SD}$	Subset	$\underline{df}$	$\underline{F}$
Performance Barriers/Blockages				2,35499	14.26***
AFPROs	4.66	1.03	1		
AFSC	4.70	1.05	1		
AF	4.61	1.12	1		
Management and Supervision				2,34618	4.15*
AFPROs	4.99	1.55	1		
AFSC	5.14	1.48	2		
AF	5.09	1.57	1,2		
Supervisory Communications Climate				2,34268	1.21
AFPROs	4.64	1.54	1		
AFSC	4.70	1.55	1		
AF	4.66	1.63	1		
Organizational Communications Climate				2,34002	38.95***
AFPROs	4.48	1.38	1		
AFSC	4.57	1.36	1		
AF	4.74	1.37	2		

NOTE: Groups not in the same subset are significantly different at the .05 level.

*$\underline{p} < .05.$ **$\underline{p} < .01.$ ***$\underline{p} < .001.$

Appendix B

Table B-3

AFPRO vs AFSC vs AF Personnel

Unit Effectiveness

Factors	Mean	SD	Subset	df	F
Pride				2,36643	121.39***
AFPROs	5.15	1.53	1		
AFSC	5.20	1.46	1		
AF	5.50	1.41	2		
Advancement/Recognition				2,34488	2.83
AFPROs	4.03	1.29	1		
AFSC	4.03	1.30	1		
AF	4.07	1.35	1		
Work Group Effectiveness				2,35439	17.34***
AFPROs	5.38	1.35	1		
AFSC	5.70	1.20	2		
AF	5.69	1.19	2		
General Organizational Climate				2,34011	47.53***
AFPROs	4.63	1.37	1		
AFSC	4.79	1.35	2		
AF	4.96	1.36	3		
Job Related Satisfaction				2,33229	4.48*
AFPROs	5.38	1.08	1		
AFSC	5.36	1.05	1		
AF	5.41	1.09	1		

NOTE: Groups not in the same subset are significantly different at the .05 level.

*$p < .05$.   **$p < .01$.   ***$p < .001$.

Table B-4

AFPRO vs AFSC vs AF Personnel

Job Enrichment

Factors	Mean	SD	Subset	df	F
Skill Variety				2,36648	6.09**
AFPROs	5.02	1.41	1		
AFSC	5.18	1.35	2		
AF	5.21	1.35	2		
Task Identity				2,36674	43.45***
AFPROs	5.22	1.20	1		
AFSC	5.17	1.21	1		
AF	5.32	1.18	2		
Task Significance				2,36779	252.38***
AFPROs	5.30	1.44	1		
AFSC	5.44	1.34	2		
AF	5.81	1.22	3		
Job Feedback				2,36748	24.53***
AFPROs	4.80	1.27	1		
AFSC	4.91	1.25	2		
AF	5.02	1.24	3		
Need For Enrichment Index				2,35631	65.34***
AFPROs	5.89	1.03	2		
AFSC	5.98	1.00	3		
AF	5.80	1.12	1		

NOTE: Groups not in the same subset are significantly different at the .05 level.

*p < .05.   **p < .01.   ***p < .001.

APPENDIX

APPENDIX C

<u>Organizational Assessment Package Survey:</u>

<u>Factors and Variables</u>

FACTORS AND VARIABLES OF THE
ORGANIZATIONAL ASSESSMENT PACKAGE

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center (LMDC) and is used to aid LMDC in its missions to: (a) conduct research on Air Force systemic issues using information in the OAP database, (b) provide leadership and management training, and (c) provide management consultation service to Air Force commanders upon request.

Allowable responses to the attitudinal items on the survey range from 1 (low) to 7 (high). The attitudinal items are grouped into 25 factors that address such areas as the job itself, management and supervision, communications, and performance in the organization. Each data record consists of 7 externally coded descriptors and 24 demographic items as well as the responses to the 93 attitudinal items.

The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: input, process, and output (adapted from McGrath's model).

Input. In LMDC's adaptation of the model, input is comprised of demographics, work itself, and job enrichment.

A. Demographics. Descriptive or background information about the respondents to the OAP survey.

B. Work Itself. The work itself has to do with the task properties (technologies) and environmental conditions of the job. It assesses the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among position and roles. The following OAP factors measure the work itself:

806 - Job Desires (Need For Enrichment)
810 - Job Performance Goals
812 - Task Characteristics
813 - Task Autonomy
814 - Work Repetition
816 - Desired Repetitive Easy Tasks
823 - Job Related Training
       Job Influences (not a statistical factor)

C. Job Enrichment. Measures the degree to which the job itself is interesting, meaningful, challenging, and responsible. The following OAP factors measure job enrichment:

800 - Skill Variety
801 - Task Identity
802 - Task Significance
804 - Job Feedback
806 - Need For Enrichment Index (Job Desires)
807 - Job Motivation Index

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808 - OJI Total Score
809 - Job Motivation Index - Additive
825 - Motivation Potential Score

Work Group Process. The work group assesses the pattern of activity and interaction among the group members. The following OAP factors measures leadership and the work group process:

805 - Performance Barriers/Blockages (Work Support)
818 - Management and Supervision
819 - Supervisory Communications Climate
820 - Organizational Communications Climate
       Work Interferences (not a statistical factor)
       Supervisory Assistance (not a statistical factor)

Work Group Output. Measures task performance, group development, and effects on group members. Assesses the quantity and quality of task performance and alteration of the group's relation to the environment. Assesses changes in positions and role patterns, and in the development of norms. Assesses changes on skills and attitudes, and effects on adjustment. The following OAP factors measure the work group output:

811 - Pride
817 - Advancement/Recognition
821 - Work Group Effectiveness (Perceived Productivity)
822 - Job Related Satisfaction
824 - General Organizational Climate

EXTERNALLY CODED DESCRIPTORS

Batch Number

Julian Date of Survey

Major Command

Base Code

Consultation Method

Consultant Code

Survey Version

(Note: These items are concatenated to each data record during EDP processing.)

2

Statement

Total months in present career field:

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

Total months at this station:

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

Total months in present position:

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

Your Ethnic Group is:

1. American Indian or Alaskan Native
2. Asian or Pacific Islander
3. Black, not of Hispanic Origin
4. Hispanic
5. White, not of Hispanic Origin
6. Other

Which of the following "best" describes your marital status?

0. Not married.
1. Married: Spouse is a civilian employed outside home.
2. Married: Spouse is a civilian employed outside home; geographically separated.
3. Married: Spouse not employed outside home.
4. Married: Spouse not employed outside home; geographically separated.
5. Married: Spouse is a military member.
6. Married: Spouse is a military member; geographically separated.
7. Single parent.

Variable Number	Statement Number
004	2
005	3
006	4
007	5
008	11

DEMOGRAPHIC ITEMS (NOT A STATISTICAL FACTOR)

Variable Number	Statement Number	Statement
. . .	. . .	Supervisor's Code
. . .	. . .	Work Group Code
. . .	. . .	Sex
. . .	. . .	Your age is
. . .	. . .	You are (officer, enlisted, GS, etc.)
. . .	. . .	Your pay grade is
. . .	. . .	Primary AFSC
. . .	. . .	Duty AFSC

(Note: The above items are on the response sheet.)

001	-	(Not used)
002	-	(Not used)
003	1	Total years in the Air Force:

1. Less than 1 year
2. More than 1 year, less than 2 years
3. More than 2 years, less than 3 years
4. More than 3 years, less than 4 years
5. More than 4 years, less than 8 years
6. More than 8 years

Variable Number	Statement Number	Statement
009	6	Your highest education level obtained is: 1. Non-high school graduate 2. High school graduate or GED 3. Less than two years college 4. Two years or more college 5. Bachelors Degree 6. Masters Degree 7. Doctoral Degree
010	7	Highest level of professional military education (residence or correspondence): 0. None or not applicable 1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2) 2. NCO Leadership School (NCO Phase 3) 3. NCO Academy (NCO Phase 4) 4. Senior NCO Academy (NCO Phase 5) 5. Squadron Officer School 6. Intermediate Service School (i.e., ACSC, AFSC) 7. Senior Service School (i.e., AWC, ICAF, NWC)
011	8	How many people do you directly supervise? 1. None 5. 4 to 5 2. 1 6. 6 to 8 3. 2 7. 9 or more 4. 3
012	9	For how many people do you write performance reports? 1. None 5. 4 to 5 2. 1 6. 6 to 8 3. 2 7. 9 or more 4. 3
013	10	Does your supervisor actually write your performance report? 1. Yes 2. No 3. Not sure
014	11	Your work requires you to work primarily: 1. Alone 2. With one or two people 3. As a small work group (3-5 people) 4. As a large work group (6 or more people) 5. Other
015	12	What is your usual work schedule? 1. Day shift, normally stable hours 2. Swing shift (about 1600-2400) 3. Mid shift (about 2400-0800) 4. Rotating shift schedule 5. Day or shift work with irregular/unstable hours 6. Frequent TDY/travel or frequently on-call to report to work 7. Crew schedule
016	13	How often does your supervisor hold group meetings? 1. Never 4. Weekly 2. Occasionally 5. Daily 3. Monthly 6. Continuously
017	14	How often are group meetings used to solve problems and establish goals? 1. Never 3. About half the time 2. Occasionally 4. All of the time
018	15	What is your aeronautical rating and current status? 1. Nonrated, not on aircrew 2. Nonrated, now on aircrew 3. Rated, in crew/operations job 4. Rated, in support job

FACTORS

Each 800 series factor consists of two or more variables which correspond to statements in the OAP. A mean score can be derived for each factor except 805, 807, 808, 809 and 825 by using a "straight average." The formula for computing the exceptions is indicated.

FACTOR 800 - SKILL VARIETY: Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills require are *valued* by the worker.

Variable Number	Statement Number	Statement
201	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
212	29	To what extent does your job require you to use a number of complex skills?

FACTOR 801 - TASK IDENTITY: Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

Variable Number	Statement Number	Statement
202	18	To what extent does your job involve doing a whole task or unit of work?
211	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?

Variable Number	Statement Number	Statement
019	16	Which of the following best describes your career or employment intentions? 1. Planning to retire in the next 12 months 2. Will continue in/with the Air Force as a career 3. Will most likely continue in/with the Air Force 4. May continue in/with the Air Force 5. Will most likely not make the Air Force a career 6. Will separate/terminate from the Air Force as soon as possible

NOTE: Variable 008, Statement 11 was added to the OAP on 19 Jan 80 and replaced variable 014 which appears on page 6. Although no longer used, Variable 014 is still shown because data collected from about 25,000 samples for this variable are still in the data base.

FACTOR 802 - TASK SIGNIFICANCE: Measures the degree to which the job has a substantial impact on the lives or work of others; the importance of the job.

Variable Number	Statement Number	Statement
203	19	To what extent is your job significant in that it affects others in some important way?
210	27	To what extent does doing your job well affect a lot of people?

FACTOR 803 (NOT USED)

FACTOR 804 - JOB FEEDBACK: Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

Variable Number	Statement Number	Statement
272	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?
209	26	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?

FACTOR 805 - WORK SUPPORT: Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

Variable Number	Statement Number	Statement
206	23	To what extent do additional duties interfere with the performance of your primary job?
207	24	To what extent do you have adequate tools and equipment to accomplish your job?
208	25	To what extent is the amount of work space provided adequate?

Formula   (8-206+207+208)/3

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FACTOR 806 - NEED FOR ENRICHMENT INDEX (JOB DESIRES): Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) the individual would like in a job.

Variable Number	Statement Number	Statement
		(In my job, I would like to have the characteristics described--from "not at all" to "an extremely large amount")
249	51	Opportunities to have independence in my work.
250	52	A job that is meaningful.
251	53	The opportunity for personal growth in my job.
252	54	Opportunities in my work to use my skills.
253	55	Opportunities to perform a variety of tasks.

FACTOR 807 - JOB MOTIVATION INDEX: A composite index derived from the six job characteristics that reflects the overall "motivating potential" of a job; the degree to which a job will prompt high internal work motivation on the part of job incumbents.

Index is computed using the following factors:

800	Skill variety
801	Task identity
802	Task significance
805	Performance barriers/blockages
813	Task autonomy
804	Job feedback

Formula   ((800+801+802+805)/4)*813*804

FACTOR 808 - QLI TOTAL SCORE: Assesses one's perception of motivation provided by his or her job. This factor is a variation of a scale employed by other job motivation theorists.

Score is computed using the variables in the following formula:

Formula   (V201+V202+V203+V270+V271+V272
           +8.V206+V207+V208+V209+V210
           +V211+V212+V213)

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FACTOR 012 - TASK CHARACTERISTICS: A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

Variable Number	Statement Number	Statement
201	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
202	18	To what extent does your job involve doing a whole task or unit of work?
203	19	To what extent is your job significant, in that it affects others in some important way?
272	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?
209	26	To what extent does your job provide the chance to time for yourself where you do a good job, and to be responsible for your own work?
210	27	To what extent does doing your job well affect a lot of people?
211	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?
212	29	To what extent does your job require you to use a number of complex skills?

FACTOR 013 - TASK AUTONOMY: Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision making, and means for accomplishing a job.

Variable Number	Statement Number	Statement
270	20	To what extent does your job provide a great deal of freedom and independence in scheduling your work?
271	21	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
213	30	To what extent does your job give you freedom to do your work as you see fit?
214	31	To what extent are you allowed to make the major decisions required to perform your job well?

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FACTOR 009 - JOB MOTIVATION INDEX --- ADDITIVE: This factor is a variation of a scale employed by other job motivation theorists.

Index is computed using the following factors:

000	Skill variety
001	Task identity
002	Task significance
005	Performance barriers/blockages
013	Task autonomy
004	Work repetition

Formula   ((000+001+002+005)/4)+013+004

FACTOR 010 - JOB PERFORMANCE GOALS: Measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging.

Variable Number	Statement Number	Statement
217	34	To what extent do you know exactly what is expected of you in performing your job?
218	35	To what extent are your job performance goals difficult to accomplish?
273	36	To what extent are your job performance goals clear?
274	37	To what extent are your job performance goals specific?
221	38	To what extent are your job performance goals realistic?

FACTOR 011 - PRIDE: Measures the pride in one's work.

Variable Number	Statement Number	Statement
215	32	To what extent are you proud of your job?
275	44	To what extent does your work give you a feeling of pride?

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FACTOR B14 - WORK REPETITION: Measures the extent to which one performs the same tasks or faces the same type of problem in his or her job on a regular basis.

Variable Number	Statement Number	Statement
226	39	To what extent do you perform the same tasks repeatedly within a short period of time?
227	40	To what extent are you faced with the same type of problem on a weekly basis?

FACTOR B15 (NOT USED)

FACTOR B16 - DESIRED REPETITIVE EASY TASKS: Measures the extent to which one desires his or her job involve repetitive tasks or tasks that are easy to accomplish.

Variable Number	Statement Number	Statement
255	56	A job in which tasks are repetitive.
256	57	A job in which tasks are relatively easy to accomplish.

FACTOR - JOB INFLUENCES (NOT A STATISTICAL FACTOR):

Variable Number	Statement Number	Statement
216	33	To what extent do you feel accountable to your supervisor in accomplishing your job?
238	42	To what extent do co-workers in your work group maintain high standards of performance?

FACTOR B17 - ADVANCEMENT/RECOGNITION: Measures one's awareness of advancement and recognition, and feelings of being prepared (i.e., learning new skills for promotion).

Variable Number	Statement Number	Statement
234	41	To what extent are you aware of promotion/advancement opportunities that affect you?
239	43	To what extent do you have the opportunity to progress up your career ladder?

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240	44	To what extent are you being prepared to accept increased responsibility?
241	45	To what extent do people who perform well receive recognition?
276	47	To what extent do you have the opportunity to learn skills which will improve your promotion potential?

FACTOR B18 - MANAGEMENT and SUPERVISION (A): Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

Variable Number	Statement Number	Statement
404	58	My supervisor is a good planner.
405	59	My supervisor sets high performance standards.
410	60	My supervisor encourages teamwork.
411	61	My supervisor represents the group at all times.
412	62	My supervisor establishes good work procedures.
413	63	My supervisor has made his responsibilities clear to the group.
445	64	My supervisor fully explains procedures to each group member.
416	65	My supervisor performs well under pressure.

FACTOR - MANAGEMENT and SUPERVISION (B): (NOT A STATISTICAL FACTOR)

Variable Number	Statement Number	Statement
424	66	My supervisor takes time to help me when needed.
434	71	My supervisor lets me know when I am doing a poor job.
439	75	When I need technical advice, I usually go to my supervisor.

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FACTOR 819 - SUPERVISORY COMMUNICATIONS CLIMATE: Measures the degree to which the worker perceives that there is good rapport with supervisors; that there is a good working environment, that innovation for task improvement is encouraged, and that rewards are based upon performance.

Variable Number	Statement Number	Statement
426	67	My supervisor asks members for their ideas on task improvement.
428	68	My supervisor explains how my job contributes to the overall mission.
431	69	My supervisor helps me set specific goals.
433	70	My supervisor lets me know when I am doing a good job.
435	72	My supervisor always helps me improve my performance.
436	73	My supervisor insures that I get job related training when needed.
437	74	My job performance has improved due to feedback received from my supervisor.
442	76	My supervisor frequently gives me feedback on how well I am doing my job.

FACTOR 820 - ORGANIZATIONAL COMMUNICATIONS CLIMATE: Measures the degree to which the worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

Variable Number	Statement Number	Statement
300	82	Ideas developed by my work group are readily accepted by management personnel above my supervisor.
301	83	My organization provides all the necessary information for me to do my job effectively.
302	84	My organization provides adequate information to my work group.
303	85	My work group is usually aware of important events and situations.
304	86	My complaints are aired satisfactorily.
309	91	The information in my organization is widely shared so that those needing it have it available.

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		My organization has clear-cut goals.
314	96	My organization has clear-cut goals.
317	99	The goals of my organization are reasonable.
318	100	My organization provides accurate information to my work group.

FACTOR 821 - WORK GROUP EFFECTIVENESS: Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

Variable Number	Statement Number	Statement
259	77	The quantity of output of your work group is very high.
260	78	The quality of output of your work group is very high.
261	79	When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
264	80	Your work group always gets maximum output from available resources (e.g., personnel and material).
265	81	Your work group's performance in comparison to similar work groups is very high.

FACTOR - WORK INTERFERENCES (NOT A STATISTICAL FACTOR): Identifies things that impede an individual's job performance.

Variable Number	Statement Number	Statement
277	48	To what extent do you have the necessary supplies to accomplish your job?
278	49	To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
279	50	To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

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FACTOR 824 - GENERAL ORGANIZATIONAL CLIMATE: Measures the individual's perception of his or her organizational environment as a whole (i.e. spirit, teamwork, communications, organizational pride, etc.).

Variable Number	Statement Number	Statement
305	87	My organization is very interested in the attitudes of the group members toward their jobs.
306	88	My organization has a very strong interest in the welfare of its people.
307	89	I am very proud to work for this organization.
308	90	I feel responsible to my organization in accomplishing its mission.
310	92	Personnel in my unit are recognized for outstanding performance.
311	93	I am usually given the opportunity to show or demonstrate my work to others.
312	94	There is a high spirit of teamwork among my co-workers.
313	95	There is outstanding cooperation between work groups of my organization.
315	97	I feel motivated to contribute my best efforts to the mission of my organization.
316	98	My organization rewards individuals based on performance.

FACTOR 825 - MOTIVATION POTENTIAL SCORE: This factor is another variation of a scale employed by other job motivation theorists. The score ranges between 1 and 343 with 109 being the Air Force average. Low scores indicate a poorly motivating job. Score is computed using the following factors:

800	Skill variety
801	Task identity
802	Task significance
804	Job feedback
813	Task autonomy

Formula ((800+801+802)/3)*813*804

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FACTOR 822 - JOB RELATED SATISFACTION: Measures the degree to which the worker is generally satisfied with factors surrounding the job.

Variable Number	Statement Number	Statement
705	101	**Feeling of Helpfulness** The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
709	102	**Co-worker Relationships** My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
710	103	**Family Attitude Toward Job** The recognition and the pride my family has in the work I do.
717	106	**Work Schedule** My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
718	107	**Job Security**
719	108	**Acquired Valuable Skills** The chance to acquire valuable skills in my job which prepare me for future opportunities
723	109	**My Job as a Whole**

FACTOR 823 - JOB RELATED TRAINING: Measures the extent to which one is satisfied with on-the-job and technical training received.

Variable Number	Statement Number	Statement
711	104	**On-the-Job Training (OJT)** The OJT instructional methods and instructors' competence.
712	105	**Technical Training (Other than OJT)** The technical training I have received to perform my current job.

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VARIABLES

Variable Number	Factor	Statement Number	Statement
201	800/812	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
202	801/812	18	To what extent does your job involve doing a whole task or unit of work?
203	802/812	19	To what extent is your job significant, in that it affects others in some important way?
204 & 205	--	--	(Not used)
206	805	23	To what extent do additional duties interfere with the performance of your primary job?
207	805	24	To what extent do you have adequate tools and equipment to accomplish your job?
208	805	25	To what extent is the amount of work space provided adequate?
209	804/812	26	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?
210	802/812	27	To what extent does your job well affect a lot of people?
211	801/812	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?
212	800/812	29	To what extent does your job require you to use a number of complex skills?

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VARIABLES

Variable Number	Factor	Statement Number	Statement
213	813	30	To what extent does your job give you freedom to do your work as you see fit?
214	813	31	To what extent are you allowed to make the major decisions required to perform your job well?
215	811	32	To what extent are you proud of your job?
216*	--	33	To what extent do you feel accountable to your supervisor in accomplishing your job?
217	810	34	To what extent do you know exactly what is expected of you in performing your job?
218	810	35	To what extent are your job performance goals difficult to accomplish?
219 & 220	--	--	(Not used)
221	810	38	To what extent are your job performance goals realistic?
222-225	--	--	(Not used)
226	814	39	To what extent do you perform the same tasks repeatedly within a short period of time?
227	814	40	To what extent are you faced with the same type of problem on a weekly basis?

* This variable is an element of "job influences" (not a statistical factor).

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Variable Number	Factor	Statement Number	Statement
228-233	--	--	(Not used)
234	817	41	To what extent are you aware of promotion/advancement opportunities that affect you?
235-237	--	--	(Not used)
238*	--	42	To what extent do co-workers in your work group maintain high standards of performance?
239	817	43	To what extent do you have the opportunity to progress up your career ladder?
240	817	44	To what extent are you being prepared to accept increased responsibility?
241	817	45	To what extent do people who perform well receive recognition?
242-248	--	--	(Not used)
249	806	51	Opportunities to have independence in my work?
250	806	52	A job that is meaningful.
251	806	53	The opportunity for personal growth in my job.
252	806	54	Opportunities in my work to use my skills.
253	806	55	Opportunities to perform a variety of tasks.
254	--	--	(Not used)
255	816	56	A job in which tasks are repetitive.

* This variable is an element of "Job Influences" (not a statistical factor).

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Variable Number	Factor	Statement Number	Statement
256 & 257	--	--	(Not used)
258	816	57	A job in which tasks are relatively easy to accomplish.
259	821	77	The quantity of output of your work group is very high.
260	821	78	The quality of output of your work group is very high.
261	821	79	When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
262 & 263	--	--	(Not used)
264	821	80	Your work group always gets maximum output from available resources (e.g., personnel and material).
265	821	81	Your work group's performance in comparison to similar work groups is very high.
266-269	--	--	(Not used)
270	813	20	To what extent does your job provide a great deal of freedom and independence in scheduling your work?
271	813	21	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
272	804/812	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?

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Variable Number	Factor	Statement Number	Statement
273	B10	36	To what extent are your job performance goals clear?
274	B10	37	To what extent are your job performance goals specific?
275	B11	46	To what extent does your work give you a feeling of pride?
276	B17	47	To what extent do you have the opportunity to learn skills which will improve your promotion potential?
277**	--	48	To what extent do you have the necessary supplies to accomplish your job?
278**	--	49	To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
279**	--	50	To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?
280-299	--	--	(Not used)
300	B20	82	Ideas developed by my work group are readily accepted by management personnel above my supervisor.
301	B20	83	My organization provides all the necessary information for me to do my job effectively.
302	B20	84	My organization provides adequate information to my work group.

** These variables are elements of "work interferences" (not a statistical factor).

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Variable Number	Factor	Statement Number	Statement
303	B20	85	My work group is usually aware of important events and situations.
304	B20	86	My complaints are aired satisfactorily.
305	B24	87	My organization is very interested in the attitudes of the group members toward their jobs.
306	B24	88	My organization has a very strong interest in the welfare of its people.
307	B24	89	I am very proud to work for this organization.
308	B24	90	I feel responsible to my organization in accomplishing its mission.
309	B20	91	The information in my organization is widely shared so that those needing it have it available.
310	B24	92	Personnel in my unit are recognized for outstanding performance.
311	B24	93	I am usually given the opportunity to show or demonstrate my work to others.
312	B24	94	There is a high spirit of teamwork among my co-workers.
313	B24	95	There is outstanding cooperation between work groups of my organization.

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Variable Number	Factor	Statement Number	Statement
314	820	96	My organization has clear-cut goals.
315	824	97	I feel motivated to contribute my best efforts to the mission of my organization.
316	824	98	My organization rewards individuals based on performance.
317	820	99	The goals of my organization are reasonable.
318	820	100	My organization provides accurate information to my work group.
319-403	--	--	(Not used)
404	818	58	My supervisor is a good planner.
405	818	59	My supervisor sets high performance standards.
406-409	--	--	(Not used)
410	818	60	My supervisor encourages teamwork.
411	818	61	My supervisor represents the group at all times.
412	818	62	My supervisor establishes good work procedures.
413	.	63	My supervisor has made his responsibilities clear to the group.
414 & 415	--	--	(Not used)
416	818	65	My supervisor performs well under pressure.
417-423	--	--	(Not used)
424***	--	66	My supervisor takes time to help me when needed.
425	--	--	(Not used)

*** This variable is an element of "supervisory assistance" (not a statistical factor).

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Variable Number	Factor	Statement Number	Statement
426	819	67	My supervisor asks members for their ideas task improvements.
427	--	--	(Not used)
428	819	68	My supervisor explains how my job contributes to the overall mission.
429 & 430	--	--	(Not used)
431	819	69	My supervisor helps me set specific goals.
432	--	--	(Not used)
433	819	70	My supervisor lets me know when I am doing a good job.
434***	--	71	My supervisor lets me know when I am doing a poor job.
435	819	72	My supervisor always helps me improve my performance.
436	819	73	My supervisor insures that I get job related training when needed.
437	819	74	My job performance has improved due to feedback received from my supervisor.
438	--	--	(Not used)
439***	--	75	When I need technical advice, I usually go to my supervisor.
440 & 441	--	--	(Not used)
442	819	76	My supervisor frequently gives me feedback on how well I am doing my job.
443 & 444	--	--	(Not used)
445	818	64	My supervisor fully explains procedures to each group member.
446-704	--	--	(Not used)

*** These variables are elements of "supervisory assistance" (not a statistical factor).

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Variable Number	Factor	Statement Number	Statement
705	822	101	**Feeling of Helpfulness** The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
706-708	--	--	(Not used)
709	822	102	**Co-worker Relationships** My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
710	822	103	**Family Attitude Toward Job** The recognition and the pride my family has in the work I do.
711	823	104	**On-the-Job Training (OJT)** The OJT instructional methods and instructors' competence.
712	823	105	**Technical Training (Other than OJT)** The technical training I have received to perform my current job.
713-716	--	--	(Not used)
717	822	106	**Work Schedule** My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
718	822	107	**Job Security**
719	822	108	**Acquired Valuable Skills** The chance to acquire valuable skills in my job which prepare me for future opportunities.
720-722	--	--	(Not used)
723	822	109	**My Job as a Whole**
724-999	--	--	(Not used)

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END

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